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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/744,134	03/21/2001	Bernard Hendrik Reesink	VER-140XX	3016

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EXAMINER

GRIFFIN, WALTER DEAN

ART UNIT PAPER NUMBER

1764

DATE MAILED: 03/03/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

# Office Action Summary

Application No.

09/744,134

Applicant(s)

REESINK ET AL.

Examiner

Walter D. Griffin

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

## Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

## Status

- 1) ☒ Responsive to communication(s) filed on 08 August 2003.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

## Disposition of Claims

- 4) ☒ Claim(s) 1,3-13,15 and 16 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1,3-13,15 and 16 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

## Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

## Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some \* c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  - ☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

## Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date \_\_\_\_\_
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_\_

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## **DETAILED ACTION**

### ***Response to Amendment***

The rejections under 35 USC 103 as described in the paper mailed on October 29, 2002 have been withdrawn in view of the amendment filed on April 29, 2003 and affidavit filed on August 8, 2003. The applied prior art does not suggest the claimed sequential contacting of the feed with the catalysts.

A new rejection follows.

### ***Claim Objections***

Claim 3 is objected to because of the following informalities: In line 10 of claim 3, the word "form" should apparently be "from". Appropriate correction is required.

### ***Claim Rejections - 35 USC § 112***

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claim 8 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claim 8 is indefinite because the expression "the support" lacks proper antecedent basis in claims 1 or 3. It appears as if claim 8 should depend on claim 7.

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*Claim Rejections - 35 USC § 103*

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

Claims 1, 3-13, 15, and 16 are rejected under 35 U.S.C. 103(a) as being unpatentable over WO 97/03150 in view of Miller et al. (US 4,738,771).

The WO reference discloses a process for hydrogenating a sulfur-containing feed stock such as a petroleum distillate having a sulfur content of 300 ppm or less. The process comprises contacting the feed first with a precious metal catalyst such as platinum and then with a nickel catalyst. The precious metal catalyst may be a supported precious metal catalyst. The support may be, for example, silica or alumina and the catalyst may contain 0.001 to 5 weight percent of

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the precious metal. The nickel catalyst may be unsupported (i.e., Raney nickel) or may be supported. The amount of nickel in the catalyst may range from 5 to 95 percent by weight. See page 3, lines 14-37; page 4, lines 1-9; page 5, lines 6-16; page 6, lines 18-37; page 7, lines 1-13 and 31-35; and page 8, lines 7-34.

The WO reference does not explicitly disclose the claimed sulfur amounts in the feed, does not disclose the inclusion of the claimed metal oxide, and does not disclose the relative amounts of each catalyst.

The Miller reference discloses a process for upgrading (i.e., desulfurizing) a hydrocarbon feed. The process comprises contacting the feed with a metal oxide (i.e., silver or copper). See column 2, line 56 through column 3, line 27; column 4, lines 63-68; and column 5, lines 6-20.

It would have been obvious to one having ordinary skill in the art at the time the invention was made to have modified the process of the WO reference by including a metal oxide as disclosed by Miller with either of the two catalysts disclosed by the WO reference or between the two catalysts disclosed by the WO reference because additional sulfur removal would be expected thereby resulting in a product having a lower sulfur content as compared to the WO process.

It also would have been obvious to one having ordinary skill in the art at the time the invention was made to have modified the process of the WO reference by using feeds that contain less than 30 ppm and less than 10 ppm sulfur because the teaching of less than 300 ppm in the WO reference would suggest to one having ordinary skill that the use of a feed having any amount of sulfur less than that disclosed including the claimed amounts would be effectively treated in the disclosed process.

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It also would have been obvious to one having ordinary skill in the art at the time the invention was made to have modified the process of the WO reference by utilizing the claimed relative amounts of the catalysts because the WO reference discloses that the amount of precious metal catalyst influences the increase in the improvement in the sulfur resistance of the nickel catalyst. Therefore, one having ordinary skill in the art would adjust amounts of the catalyst to result in a process that maximizes the effectiveness of each catalyst.

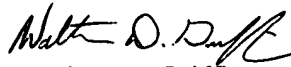
### *Conclusion*

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Walter D. Griffin whose telephone number is (571) 272-1447. The examiner can normally be reached on Monday-Friday 6:30 to 4:00 with alternate Fridays off.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Glenn Caldarola can be reached on (571) 272-1444. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



Walter D. Griffin  
Primary Examiner  
Art Unit 1764

WG  
February 27, 2004